

# Task 03

1.

The screenshot shows the phpMyAdmin interface. On the left, the database structure is visible, including a 'students' table. The main panel displays a SQL query: `SELECT * FROM students WHERE email LIKE '%@uni.edu';`. Below the query, the results are shown as a table with 5 rows. The table has columns: student\_id, full\_name, email, and major.

student_id	full_name	email	major
1	Alice Johnson	alice.j@uni.edu	Computer Science
2	Bob Smith	bob.smith@uni.edu	Business
3	Clara Oswald	clara.os@uni.edu	Computer Science
4	David Brown	david.b@uni.edu	Engineering
5	Eva Adams	eva.adams@uni.edu	Business

2.

The screenshot shows the phpMyAdmin interface with a more complex SQL query. The query is: `SELECT s.full_name, c.course_name FROM Students s JOIN Enrollments e ON s.student_id = e.student_id JOIN Courses c ON e.course_id = c.course_id;`. The results are shown as a table with 9 rows. The table has columns: full\_name and course\_name.

full_name	course_name
Alice Johnson	Database Systems
Alice Johnson	Data Structures
Bob Smith	Marketing Basics
Bob Smith	Business Analytics
Clara Oswald	Database Systems
Clara Oswald	Data Structures
David Brown	Thermodynamics
Eva Adams	Marketing Basics
Eva Adams	Business Analytics

3.

The screenshot shows the phpMyAdmin interface with the database 'task03\_colinares' selected. The left sidebar shows the database structure, including tables 'courses', 'enrollments', and 'students'. The main panel displays a SQL query:

```
1 SELECT s.full_name, c.course_name
2 FROM students s
3 JOIN enrollments e ON s.student_id = e.student_id
4 JOIN courses c ON e.course_id = c.course_id
5 WHERE s.major = 'Computer Science';
```

The query is executed, showing 3 rows (4 total). The results are displayed in a table:

full_name	course_name
Alice Johnson	Database Systems
Alice Johnson	Data Structures
Clara Oswald	Data Structures

4.

The screenshot shows the phpMyAdmin interface with the database 'task03\_colinares' selected. The left sidebar shows the database structure, including tables 'courses', 'enrollments', and 'students'. The main panel displays a SQL query:

```
1 SELECT c.course_name, AVG(e.grade) AS avg_grade
2 FROM enrollments e
3 JOIN courses c ON e.course_id = c.course_id
4 GROUP BY c.course_name;
```

The query is executed, showing 5 rows (5 total). The results are displayed in a table:

course_name	avg_grade
Business Analytics	89.0000
Data Structures	91.5000
Database Systems	90.0000
Marketing Basics	81.0000
Thermodynamics	73.0000

5.

The screenshot shows the phpMyAdmin interface with the 'task03\_colinares' database selected. The 'courses' table is chosen, and a SQL query is executed. The query calculates the average grade for each course.

```

1 SELECT c.course_name, AVG(e.grade) AS avg_grade
2 FROM enrollments e
3 JOIN courses c ON e.course_id = c.course_id
4 GROUP BY c.course_name
5 HAVING AVG(e.grade) > 85;

```

The results show 2 rows:

course_name	avg_grade
Business Analytics	89.0000
Data Structures	91.5000

6.

The screenshot shows the phpMyAdmin interface with the 'task03\_colinares' database selected. The 'courses' table is chosen, and a SQL query is executed. The query counts the number of students for each department.

```

1 SELECT c.department, COUNT(DISTINCT e.student_id) AS num_students
2 FROM enrollments e
3 JOIN courses c ON e.course_id = c.course_id
4 GROUP BY c.department;

```

The results show 3 rows:

department	num_students
Business	2
Computer Science	2
Engineering	1

7.

The screenshot shows the phpMyAdmin interface with the 'task03\_colinares' database selected. The 'students' table is chosen from the left sidebar. The SQL query editor contains the following query:

```
1 SELECT full_name
2 FROM students
3 WHERE full_name LIKE '%a%';
```

The query is executed, showing 3 rows. The results are displayed in a table:

full_name
Alice Johnson
Clara Oswald
David Brown

The interface includes various controls like 'Clear', 'Format', 'Get auto-saved query', 'Bind parameters', 'Bookmark this SQL query', and 'Extra options'.

8.

The screenshot shows the phpMyAdmin interface with the 'task03\_colinares' database selected. The 'courses' table is chosen from the left sidebar. The SQL query editor contains the following query:

```
1 SELECT c.course_name, MAX(e.grade) AS highest_grade
2 FROM enrollments e
3 JOIN courses c ON e.course_id = c.course_id
4 GROUP BY c.course_name;
```

The query is executed, showing 5 rows. The results are displayed in a table:

course_name	highest_grade
Business Analytics	90
Data Structures	92
Database Systems	95
Marketing Basics	84
Thermodynamics	73

The interface includes various controls like 'Clear', 'Format', 'Get auto-saved query', 'Bind parameters', 'Bookmark this SQL query', and 'Extra options'. A warning message states: 'Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.'

9.

Run SQL query/queries on database task03\_colinares:

```
1 SELECT s.full_name, COUNT(e.course_id) AS course_count
2 FROM students s
3 JOIN enrollments e ON s.student_id = e.student_id
4 GROUP BY s.student_id, s.full_name
5 HAVING COUNT(e.course_id) > 1;
```

Showing rows 0 - 3 (4 total. Query took 0.0006 seconds)

```
SELECT s.full_name, COUNT(e.course_id) AS course_count FROM students s JOIN enrollments e ON s.student_id = e.student_id GROUP BY s.student_id, s.full_name HAVING COUNT(e.course_id) > 1;
```

full_name	course_count
Alice Johnson	2
Bob Smith	2
Clara Oswald	2
Eva Adams	2

10.

Run SQL query/queries on database task03\_colinares:

```
1 SELECT s.full_name, AVG(e.grade) AS avg_grade
2 FROM students s
3 JOIN enrollments e ON s.student_id = e.student_id
4 JOIN courses c ON e.course_id = c.course_id
5 WHERE c.department = 'Computer Science'
6 GROUP BY s.student_id, s.full_name
7 HAVING AVG(e.grade) > (
```

Showing rows 0 - 0 (1 total. Query took 0.0037 seconds)

```
SELECT s.full_name, AVG(e.grade) AS avg_grade FROM students s JOIN enrollments e ON s.student_id = e.student_id JOIN courses c ON e.course_id = c.course_id WHERE c.department = 'Computer Science' GROUP BY s.student_id, s.full_name HAVING AVG(e.grade) > ( SELECT MAX(avg_grade) FROM ( SELECT AVG(e2.grade) AS avg_grade FROM students s2 JOIN enrollments e2 ON s2.student_id = e2.student_id JOIN courses c2 ON e2.course_id = c2.course_id WHERE c2.department = 'Computer Science' GROUP BY s2.student_id ) AS subquery );
```

full_name	avg_grade
Clara Oswald	93.0000